	Type	Hits	Search Text
1	BRS	4806	(reactor or reaction)near3 block
2	BRS	3665	((reactor or reaction)near3 block) and(stir$ or mix or mixing or mixer or mixed or agitat$)
3	BRS	3602	((reactor or reaction)near3 block) and(pressure or pressuriz$ or psig or bar)
4	BRS	2865	(((reactor or reaction)near3 block) and(stir$ or mix or mixing or mixer or mixed or agitat$)) and (((reactor or reaction)near3 block) and(pressure or pressuriz$ or psig or bar))
5	BRS	908	((reactor or reaction)near3 block) and valve
6	BRS	598	((((reactor or reaction)near3 block) and(stir$ or mix or mixing or mixer or mixed or agitat$)) and (((reactor or reaction)near3 block) and(pressure or pressuriz$ or psig or bar))) and (((reactor or reaction)near3 block) and valve)

	DBs
1	USPAT
2	USPAT
3	USPAT
4	USPAT
5	USPAT
6	USPAT

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(FILE 'HOME' ENTERED AT 13:18:12 ON 15 JAN 2004)
FILE 'CA' ENTERED AT 13:18:21 ON 15 JAN 2004
L1 5395 S (REACTOR OR REACTION)(4A)(BLOCK OR BANK OR ARRAY)
L2 673 S L1 AND(STIR? OR MIX OR MIXER OR MIXING OR MIXED OR AGITAT?)
L3 365 S L1 AND(ATM OR PSIG OR PRESSURE OR PRESSURI? OR BAR OR KBAR)
L4 69 S L2 AND L3
L5 3 S L4 AND VALVE
L6 69 S L4-5
L7 65025 S (REACTOR OR REACTION)(10A)(STIR? OR MIX OR MIXER OR MIXING OR MIXED OR AGITAT?)
L8 8946 S L7 AND(ATM OR PSIG OR PRESSURE OR PRESSURI? OR BAR OR KBAR)
L9 727 S L8 AND(LABORATORY OR BENCH OR TEST)
L10 1010 S L8 AND(ML OR MICROLITER OR MICRO LITER OR NANOLITER OR NANO LITER)
L11 8 S L8 AND(MICROSCALE OR MICRO SCALE OR MINIATURE OR MINISCALE OR MINI SCALE OR NANOSCALE OR NANO SCALE)
L12 69 S L9 AND L10
L13 96 S L9-10 AND (INJECTOR OR INJECTION OR INJECTING OR INJECTED)
L14 237 S L6,L11-13
L15 185 S L14 NOT PY>1999
L16 33 S L14 NOT L15 AND PATENT/DT
L17 218 S L15-16

=> d bib,ab 1-218 l17

L17 ANSWER 11 OF 218 CA COPYRIGHT 2004 ACS on STN
AN 137:234458 CA
TI Parallel reactor with internal sensing and method of using same
IN Turner, Howard; Dales, G. Cameron; Vanerden, Lynn; Vanbeek, Johannes A. M.; Hajduk, Damian A.; Nielsen, Ralph B.; Mansky, Paul; Matsiev, Leonid; Wang, Pei; McFarland, Eric
PA Symyx Technologies, Inc., USA
SO U.S., 88 pp., Cont.-in-part of U.S. Ser. No. 239,223.

PI	US 6455316	B1	20020924	US 2000-548848	20000413
	US 6548026	B1	20030415	US 1998-177170	19981022
	US 6306658	B1	20011023	US 1998-211982	19981214
	US 6489168	B1	20021203	US 1999-239223	19990129
PRAI	US 1998-96603P	P	19980813		

AB Devices and methods for controlling and monitoring the progress and properties of multiple reactions are disclosed. The method and app. are esp. useful for synthesizing, screening, and characterizing combinatorial libraries, but also offer significant advantages over conventional exptl. reactors as well. The app. generally includes multiple vessels for contg. **reaction** mixts., and systems for controlling the **stirring** rate and temp. of individual **reaction** mixts. or groups of **reaction** mixts. In addn., the app. may include provisions for independently controlling **pressure** in each vessel, and a system for **injecting** liqs. into the vessels at a **pressure** different than ambient **pressure**. In situ monitoring of individual reaction mixts. provides feedback for process controllers, and also provides data for detg. reaction rates, product yields, and various properties of the reaction products, including viscosity and mol. wt. Computer-based methods are disclosed for process monitoring and control, and for data display and anal.

L17 ANSWER 15 OF 218 CA COPYRIGHT 2004 ACS on STN
AN 136:39567 CA
TI Parallel semicontinuous or continuous reactors
IN Nielsen, Ralph B.; Safir, Adam; Tiede, Richard; McWaid, Thomas Harding;

Vanerden, Lynn
PA Symyx Technologies, Inc., USA
SO PCT Int. Appl., 82 pp.
PI WO 2001093998 A2 20011213 WO 2001-US17921 20010601
US 2003156989 A1 20030821 US 2001-873176 20010601
PRAI US 2000-209142P P 20000603
AB Parallel semi-continuous or continuous reactors are disclosed. The parallel reactors preferably comprise four or more reaction vessels. The reaction vessels are preferably small vol. reaction vessels, preferably **pressure** reaction vessels, and/or preferably integral with a common **reactor block**. The reaction vessels can comprise shaft-driven **stirrers**. At least two, preferably at least three or at least four liq. feed lines can provide selective fluid communication between each of the reaction vessels and one or more liq. reagent sources. Addnl. features, suitable in connection with parallel reactors or with single reaction vessels are also disclosed. The reactors are suitable for use for synthesis and/or screening of material or process conditions, to methods for synthesizing combinatorial libraries of materials, and to methods for screening combinatorial libraries of materials, such as catalysts.

L17 ANSWER 18 OF 218 CA COPYRIGHT 2004 ACS on STN
AN 135:109028 CA
TI Apparatus and method used in multiple, simultaneous synthesis of general compounds
IN Hormann, Robert Eugene; Gilbert, Daryl Eugene; Sioma, Edward Michael
PA Rohm and Haas Company, USA
SO U.S., 29 pp.
PI US 6258323 B1 20010710 US 1998-193020 19981116
PRAI US 1998-193020 19981116
AB The app. and method of the present invention provides for conducting simultaneous multiple synthesis of general compds., which often takes place under varied uneven conditions requiring heating, cooling, **agitation**, reagent/solvent addns. to the reactor contents at each reaction vessel location, supply and maintenance of inert **atm**. and means to facilitate the reflux of the reactor contents. Thus, it becomes necessary to monitor and control the reaction conditions during the simultaneous multiple synthesis of general compds. The app. allows the user to connect various independently controlling and conveying means to each reaction vessel through multiple ports provided on a stopper mounted on each reaction vessel. The app. of the present invention permits user to readily access the reaction vessels without interrupting the reactions occurring in the adjacent reaction vessels. The unique geometry and shape of the stopper allows positioning of multiple ports, while still providing the stopper with a compact size. As a result, a large **array** of **reaction** vessels can be accommodated in the device of the present invention without significantly increasing the overall size of the app. Some of the general compds. that can be readily synthesized by the app. and the method of the present invention include inorg. compds. as well as org. compds., such as oligomers, polymers, agricultural chems., drugs, peptides and oligonucleotides.

L17 ANSWER 72 OF 218 CA COPYRIGHT 2004 ACS on STN
AN 118:148045 CA
TI Design, construction and application of a fully automated equimolar peptide mixture synthesizer
AU Zuckermann, Ronald N.; Kerr, Janice M.; Siani, Michael A.; Banville, Steven C.
CS Chiron Corp., Emeryville, CA, USA
SO International Journal of Peptide & Protein Research (1992), 40(6), 497-506

AB A fully automated peptide synthesizer has been constructed that is capable of the synthesis of equimolar peptide mixts. and the simultaneous synthesis of 36 individual peptides. The synthesizer was constructed from a workstation of novel design utilizing a Zymark robot arm. A Macintosh II computer coordinates the movements of the robotic arm, the switching of over 40 solenoid **valves** and the monitoring of sensors in the workstation. The robot hands are used to deliver solvents from **pressurized** spigot lines and to pipet amino acid solns. from reservoirs to an **array** of **reaction** vessels. Liq. dispensing, reagent **mixing**, and solvent removal are controlled from a multifunction I/O board in the computer. The design features of the synthesizer are presented, as well as the characterization of multiple individual peptides, a simple mixt. of 19 components, and a complex mixt. of 15,625 components.

L17 ANSWER 95 OF 218 CA COPYRIGHT 2004 ACS on STN
AN 106:158668 CA
Correction of: 106:35338
TI The cup-and-cap **reactor**: a device to eliminate induction times in mechnaically **agitated** slurry **reactors** operated with fine catalyst particles
AU Grau, Ricardo J.; Cassano, Alberto E.; Baltanas, Miguel A.
CS INTEC, Santa Fe, 3000, Argent.
SO Industrial & Engineering Chemistry Research (1987), 26(1), 18-22
AB A 3-phase, mech. **agitated**, batch, **lab. reactor** is presented, featuring a cup-and-cap holder for powd. catalyst. The system has a fixed cover (cap) and a loose vase (cup) that are mounted on the reactor shaft. The latter has a helicoidal groove for cup descent with a follower pin. Two horizontal grooves are provided for positioning the cup either at thetop of the helix in the gas phase or at the bottom on top of the impeller submerged in the liq. phase. The app. enables precise detn. of minute catalyst loadings, accurate control, stability of operating conditions, in situ preactivation of the catalyst at any **pressure** and temp. without external devices for **injections** or introduction of solids, and zero induction time detn. of reaction rates. Soybean Me esters (40 cm3) were hydrogenated with a loading of 2 mg of catalyst/g of liq. at 398-443 K and 272-542 kPa. Induction-time suppression and accurate initial-rate detns. were achieved. The reaction kinetics were suitable for mass-transfer-coeff. estn.

L17 ANSWER 134 OF 218 CA COPYRIGHT 2004 ACS on STN
AN 83:62478 CA
TI Reactor for vapor-phase catalytic studies
AU Berty, J. M.
CS Res. Dev. Dep., Union Carbide Corp., South Charleston, WV, USA
SO Chemical Engineering Progress (1974), 70(5), 78-84
AB A catalytic autoclave reactor (≤3000 **psig** at 300°) for vapor-phase reactions was constructed which permits kinetic studies and catalyst testing to be conducted in the mass flow regime of com. operations. Since mass velocity is known, and can be changed as desired, heat- and mass-transfer conditions between the catalyst and the gas can be selected that are equal to, or better if needed, than those in prodn. units. Catalyst quant. from a single particle to 500 **ml** can be used in a hermetically-closed, leak- and contamination-free condition. The degree of **mixing** in the **reactor** approxs. the perfectly **mixed** conditions well, and this greatly simplifies subsequent kinetic anal. A new method for checking the influence of bulk diffusion in the pores of the catalyst was proposed and tested. Simple exptl. **tests** were also developed to check for rate-influencing phys. and noncatalytic chem. effect. The reactor was used for studying the hydrogenation of C2H4.

L17 ANSWER 142 OF 218 CA COPYRIGHT 2004 ACS on STN

AN 72:118278 CA
TI **Pressure** vessel for biochemical studies under hyperbaric conditions
AU Hanasono, George K.; Hollis, Jerry L.; Schwartz, Sorell L.
CS Nav. Med. Res. Inst., Nat. Nav. Med. Center, Bethesda, MD, USA
SO Analytical Biochemistry (1970), 34(2), 470-7
AB A **pressure** vessel for biochem. studies under hyperbaric conditions is described which provides the following operating capabilities: temp. control and monitoring, adequate **mixing** of the **reaction** mixt., quant. single or multiple reagent addn. under **pressurized** conditions, adequate purging of the gas phase in the vessel, rapid accessibility to vessel contents for sampling, and chem. compatibility with hyperoxic **atms**. The app. differs from the **pressure** vessel app. of B. G. D'Aoust (1968) in the following ways: most of the vessel components are external to reduce the vessel size, the reagent addn. mechanism is loaded externally and **injection** is effected pneumatically, a purge valve is included to permit a more rapid and thorough gas purge; sampling is achieved by depressurizing and opening the vessel. The av. delivery error for the **injection** 1-**ml** aliquots of H2O was 30.1 ± 3.7 μl.

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